

REMARKS

Election/Restriction

Withdrawn claims 21-51 have been canceled from the present application. Applicant reserves the right to file the canceled claims in a separate divisional application.

Rejections Under 35 USC §112, second paragraph

Claims 1-20 have been rejected under 35 USC §112, second paragraph, as being indefinite.

Claims 1 and 6 have been rejected due to the recitation of "an angle relative to the dough piece". Claim 1 and 6 have been amended to remove this recitation.

Claim 4 has been rejected due to the recitation of "a sealed chamber bounded by a sealed edge". Claim 4 has been amended to make this recitation clearer.

Claim 6 has been rejected due to the recitation of "to form a dough piece retained by the cutter segment and a web scrap". Claim 6 has been amended to make this recitation clearer.

Claim 14 has been rejected due to the recitation of "a selected orientation relative to the dough piece." Claim 14 has been amended to remove this recitation.

Rejections Under 35 USC §102 and 35 USC §103

Claims 1, 6, 7, 9-10 and 13 have been rejected under 35 USC §102(b) as being anticipated by McNeel et al. (US Patent No. 6,412,397).

Claims 1, 2, 6, 8, 9 and 10 have been rejected under 35 USC §103 as being anticipated by Ricke et al. (US Patent No. 5,547,695).

Claims 1-10 and 14-20 have been rejected under 35 USC §103(a) as being unpatentable over Pavan (US Patent No. 6,168,817) in view of Fay (US Patent No. 4,212,609).

Claim 11 has been rejected under 35 USC §103(a) as being unpatentable over Pavan (US Patent No. 6,168,817), as applied to claims 1-10 and 14-20, and further in view of Fay (US Patent No. 4,212,609).

Claim 12 has been rejected under 35 USC §103(a) as being unpatentable over Pavan (US Patent No. 6,168,817), and further in view of Fay (US Patent No. 4,212,609) as applied to claims 1-10 and 14-20, and further in view of Kuchuris (US Patent No. 3,536,014).

Claim 13 has been rejected under 35 USC §103(a) as being unpatentable over Pavan (US Patent No. 6,168,817), and further in view of Fay (US Patent No. 4,212,609) as applied to claims 1-10 and 14-20, and further in view of McNeel (US Patent No. 6,412,397).

Claims 1-10 and 13-19 have been rejected under 35 USC §103(a) as being unpatentable over Dayley (US Patent No. 5,306,133) in view of Bornhorst et al. (US Patent No. 6,174,556).

Claim 11 has been rejected under 35 USC §103(a) as being unpatentable over Dayley (US Patent No. 5,306,133) in view of Bornhorst et al. (US Patent No. 6,174,556), as applied to claims 1-10 and 13-20, and further in view of Fay (US Patent No. 3,427,649).

Claim 12 has been rejected under 35 USC §103(a) as being unpatentable over Dayley (US Patent No. 5,306,133) in view of Bornhorst et al. (US Patent No. 6,174,556), as applied to claims 1-10 and 13-20, and further in view of Kuchuris (US Patent No. 3,536,014).

The rejections under 35 USC §102 and 35 USC §103 are traversed for the reasons to follow.

Double Patenting Rejections

Claims 1-3, 5-6 and 12 have been provisionally rejected over non statutory obviousness type double patenting over claims 1-8, 10-18 and 20-28 of copending application no. 10/822,038.

Claims 14-15, 17 and 19-20 have been provisionally rejected over non statutory obviousness type double patenting over claims 1-8, 10-18 and 20-28 of copending application no. 10/822,038 in view of Pavan (US Patent No. 6,168,817).

The double patenting rejections are traversed as application no. 10/822,038 is not prior art. In this regard, application no. 10/822,038 has a filing date of April 8, 2004 (see

Publication No. 2005/0226981). The present application has a filing date of March 30, 2004 (see filing receipt). If application no. 10/822,038 were to issue, its priority date (April 8, 2004) would not precede the priority date (March 30, 2004) of the present application.

Summary Of The Claimed Subject Matter

Claims 1-20 are directed to a process for fabricating a snack product 12A (Figure 6A). The process includes the step of: providing a dough sheet 16 (Figure 2A). The process also includes the step of cutting dough pieces 18A-18D (Figure 2A) in the dough sheet 16 (Figure 2A) separated by a web scrap 24 (Figure 2B). The process also includes the step of separating the dough pieces 18A-18D (Figure 2A) from the web scrap. The separating step can be performed by directing a pressurized gas stream at the dough pieces 18A-18D (Figure 2A), while moving the dough pieces 18A-18D (Figure 2A), and moving the web scrap 24 (Figure 2A) at an angle relative to the dough pieces 18A-18D (Figure 2A).

35 USC §102(b) Rejections of Claims 1, 6, 7, 9-10 and 13 over McNeel et al.

The 35 USC §102(b) rejections of claims 1, 6, 7, 9-10 and 13 over McNeel et al. are traversed as the cited reference does not disclose or enable all of the features of the presently claimed process. In addition, independent claims 1 and 6 have been amended to further emphasize these undisclosed features.

A first undisclosed feature is that the dough pieces 18A-18C (Figure 2A) are discharged from the cutting segments 40A (Figure 3D) by pressurized air directed through the cutting segments 40A. At the same time the web scrap 24 (Figure 2A) is pulled away from the dough pieces 18A-18C (Figure 2A) in a selected direction (directional arrow 98-Figures 1A and 1B) with a force F (Figure 2A), and the dough pieces 18A-18C (Figure 2A) are then moved away from the web scrap 24 (Figure 2A).

Claim 1 recites the step of "separating the dough piece from the web scrap by directing a pressurized gas through the cutting segment at the dough piece to discharge the dough piece from the cutting segment while pulling the web scrap away from the

dough piece in a selected direction with a force F, and then moving the dough pieces away from the web scrap."

Antecedent basis for the "through the cutting segments" recitation is contained in paragraph [0068] of the published application (page 16, lines 33-37 of the specification). The "selected direction" recitation is represented by directional arrow 98 in Figures 1A and 1B, which is described in paragraph [0062] of the published application (page 14, line 30 of the specification). Antecedent basis for the "moving the dough pieces away" recitation is contained in paragraph [0069] of the published application (page 17, lines 21-22 of the specification).

As stated in paragraph [0069] of the published application (page 17, lines 16-22 of the specification):

"The separation of the dough pieces 18A-18D from the web scrap 24 is thus performed by the combination of gas pressure on the dough pieces 18A-18D, movement of the web scrap 24 away from the dough pieces 18A-18D, angular orientation of the web scrap 24 relative to the dough pieces 18A-18D, and movement of the dough pieces 18A-18D away from the web scrap 24."

In McNeel et al. a vacuum is used to hold the tortilla chips which are then "air peeled" from the cutting ring (column 7, lines 1-5). Air peeling is not the same as directing air pressure through a cutting segment. In addition, as shown in Figure 9 of McNeel et al. the waste lace falls off the die cutting rollers 202, but is not pulled in a selected direction with a force F as presently claimed.

A second undisclosed feature recited in amended claim 1 is that the dough sheet includes "a first layer" and "a second layer". In addition, amended claim 1 recites the step of "cutting a dough piece having a continuous edge and a web scrap in the dough sheet using a cutting segment comprising a cup having a peripheral shape defined by a continuous shaped blade which crimps the first layer and the second layer together on the continuous edge of the dough piece". Antecedent basis for the "cup" recitation is contained in paragraph [0045] of the published application (page 9, line 31 of the specification). In McNeel et al. the mold cavity elements 47 (Figure 2) are not cups having shaped blades which crimp the edges of the dough pieces. The present process forms a snack product with a sealed interior chamber.

Amended dependent claim 2 further defines this feature by stating "the shaped blade has a stepped cutting edge". Antecedent basis for this recitation is contained in paragraph [0049] of the published application (page 10, lines 23-24 of the specification).

Amended independent claim 6 also recites that the "pressing" step forms "a continuous edge comprised of the first layer and the second layer crimped together".

A third undisclosed feature recited in amended independent claim 6 is the step of "directing a pressurized gas through the cutting segment at the dough piece to discharge the dough piece from the cutting segment onto a first conveyor moving in a first direction". The first conveyor is the dough conveyor shown in Figure 2A.

Amended independent claim 6 also recites the step of "pulling the web scrap away from the dough piece during the directing step with a force F using a second conveyor moving in a second direction at an angle to the first direction." The second conveyor is the conveyor belt 90 shown in Figures 1A-1B. In addition, antecedent basis for the angle recitation is contained in paragraph [0064] of the published application (page 15, lines 11-24 of the specification). Amended dependent claim 13 further defines this feature by stating a range for the angle. McNeel et al. does not disclose a process wherein two conveyors are used in concert to move the cut dough pieces and the web scrap in separate directions.

In view of the above noted features, the presently claimed process is submitted to be novel and unobvious over McNeel et al. The present process is more efficient at separating the dough pieces from the cutting segments, and is more efficient at separating the web scrap from the dough pieces. These improved results are submitted to be indicia of unobviousness.

35 USC §102(b) Rejections of Claims 1, 2, 6, 8, 9 and 10 over Ricke et al.

The 35 USC §102(b) rejections of claims 1, 2, 6, 8, 9 and 10 over Ricke et al. are traversed as the cited reference does not disclose or enable all of the features of the presently claimed process. In this regard, the above noted amendments to independent claims 1 and 6 are submitted to patentably distinguish the claimed process from Ricke et al.

In Ricke a dough source 102 deposits a dough sheet 99 onto a conveyor 110. Dough forming elements 201 cut circular pizza crusts 90 while scrap dough 89 is directed onto a roller 130 that returns the scrap dough to the dough source 102 (column 4, line 20). Pressurized air is used to "reduce the likelihood of dough sticking to the dough forming element" (column 2, lines 4-5).

In the present process the dough pieces stick to the cutting segments and pressurized air is directed through the cutting segments to discharge the dough pieces from the cutting segments. At the same time, the web scrap is pulled with a force and transferred away from the dough pieces in a different direction. In Ricke et al. pressurized air is used to prevent sticking of the pizza crusts 90 to the dough forming elements 201. However, there is no air discharge performed simultaneously with pulling on the scrap dough 89. In this regard, please note Figure 1 of Ricke wherein the roller 130 separates the scrap dough 89 from the pizza crusts 90, but not by a combination of pressurized air and pulling force. Further, the roller 130 would not inherently exert a pulling force on the scrap dough 89 unless it were moving at a faster rate than the conveyor 110. However, there is no such disclosure, and no disclosure on the concept of a pulling force in combination with pressurized air to separate dough pieces from a web scrap.

Ricke et al. also does not disclose the present cutting step wherein "a cup having a peripheral shape defined by a continuous shaped blade which crimps the first layer and the second layer together on the continuous edge of the dough piece". In Ricke et al. the dough forming elements 210 form the pizza crusts 90 with a lip 92 (Figure 8) and slits 93 (Figure 8). However, two layers of dough are not crimped together along the edges of the dough pieces as presently claimed. The present process forms a snack product with a crimped edge and a sealed interior chamber and controlled pillowing. In contrast, a pizza does not have a crimped edge nor a sealed interior chamber.

Ricke et al. also does not disclose the first and second conveyors recited in amended claim 6, nor the angles for the conveyors recited in amended claim 10.

In view of these fundamental differences, the amended claims are submitted to be both novel and unobvious over Ricke et al.

35 USC §103(a) Rejections of Claims 1-10 and 14-20 over Pavan and Fay

The 35 USC §103(a) rejections of claims 1-10 and 14-20 over Pavan and Fay are traversed as this combination of references does not disclose all of the features of the presently claimed method. These rejections are further traversed as one skilled in the art at the time of the invention would have no reason to combine the references in the manner of the Office Action.

Pavan is directed to a method for producing a three dimensional snack in which two layers 10, 11 of a gelled semifinished compound are cut into consecutive segments 12, 13 (column 3, lines 7-20) using cutting rollers 16, 17 (column 3, lines 24-31). The two layers 10, 11 are superimposed and die cut using die-cutting rollers 31, 31 (column 3, lines 50-62) into semifinished snacks 34 (column 3, line 67). A grid like skeleton 35 is conveyed by a conveyor belt 36 away from the snack 34 (column 4, lines 1-4).

However, Pavan does not disclose the presently claimed separation step in which cut dough pieces are separated from a web scrap using the simultaneous application of air pressure and pulling of the web scrap away from the dough pieces in a selected direction with a force, followed by movement of the dough pieces away from the web scrap. Rather, in Pavan the snacks 34 appear to drop from the die cutting rollers 31, 32 onto a conveyor 33. In addition, there would be no pulling force exerted on the grid like skeleton 35 unless the conveyor belt 36 was moving at a greater speed than the cutting rollers 31, 32. However, there is no disclosure or recognition of this concept. In addition, it is likely that the grid like skeleton 35 needs to remain flat and unstressed for all of the complicated mechanisms to operate smoothly.

Also, Pavan teaches at column 4, line 5 that the material 10 and 11 is "tensioned longitudinally in the region upstream of the formation of the snacks". Pavan further teaches at column 4, lines 10-14 "by dividing the semifinished snacks 34 from the skeleton 35, a detensioning of the semifinished snacks 34, by retracting longitudinally spontaneously produce a certain swelling, so that apart from the perimetric regions the two layers are mutually separated." This would imply the skeleton 35 is also detensioned which is opposite to being pulled with a force as presently claimed.

Fay was cited as using tempered air to eject a food substance from a cavity (column 21, lines 28-31). Under the Examiner's analysis one skilled in the art would look

at Fay and decide to use air in the Pavan process to prevent "the shaped dough product from sticking to the die cavity". However, sticking is not generally a problem in cutting dough pieces for snack products. There is no disclosure in Pavan, and no art has been cited indicating that sticking is a problem. In Fay meat products are being formed and sticking would be a problem. The proposed reason for the combination is not from the view point of one skilled in the art, but rather from the view point of supporting a 35 USC §103 rejection. Under the criteria established by KSR Int'l Co., v. Teleflex, Inc., No 04-1350 (U.S. Apr. 30, 2007), in formulating rejections under 35 USC §103(a) it remains necessary to identify a valid reason why a person of ordinary skill in the art would have combined references.

In the present process sticking in the cutting segments is not a problem but is encouraged to shape the dough pieces. Sticking to the cutting segments also helps to create the relative angle between the dough pieces and the web scrap, and the divergent movement of the dough pieces and the web scrap. The air pressure is used to discharge the dough pieces from the cutting segments while the web scrap is simultaneously pulled with a force in a different direction.

Independent claim 14 has been amended to include limitations similar to claim 1 which emphasize the separating step wherein a combination of air pressure, pulling force and direction change are used to separate the dough pieces from the web scrap. Claim 14 also recites that the dough piece has "a continuous crimped edge comprising the first layer and the second layer crimped together". Claim 14 also recites the step of "cooking the dough piece to expand a center portion of the dough piece into a sealed hollow chamber bounded by the continuous crimped edge and by portions of the first layer and the second layer."

The Examiner has cited Figures 3, 4, 9 and 10 of Pavan as anticipating these features. However, Figures 3 and 4 illustrate features of the cutting rollers 16, 17 which form parallel hollows 24 and helical hollows 25 (column 3, lines 36-41) rather than crimped edges. In Figure 10 of Pavan the separate layers 10, 11 on the edges of the snack pieces are shown as being together, but that is not the same as being crimped as presently claimed. Also, the interior portion would not be a "sealed hollow chamber" because the

parallel hollows 24 and helical hollows 25 (Figure 5) appear to be formed all the way through the separate layers 10, 11.

35 USC §103(a) Rejection of Claim 11 over Pavan and Fay

Dependent claim 11 is submitted to be unobvious over Pavan and Fay for essentially the same reasons argued above for independent claim 6.

35 USC §103(a) Rejection of Claim 12 over Pavan, Fay and Kuchuris

Dependent claim 12 is submitted to be unobvious over Pavan, Fay and Kuchuris for essentially the same reasons argued above for independent claim 6.

35 USC §103(a) Rejection of Claim 13 over Pavan, Fay and McNeel et al.

Dependent claim 13 is submitted to be unobvious over Pavan, Fay and McNeel et al. for essentially the same reasons argued above for independent claim 6.

35 USC §103(a) Rejections of Claims 1-10 and 13-19 over Dayley and Bornhorst et al.

The 35 USC §103(a) rejections of claims 1-10 and 13-19 over Dayley and Bornhorst et al. are traversed as this combination of references does not disclose all of the features of the presently claimed method. These rejections are further traversed as one skilled in the art at the time of the invention would have no reason to combine the references in the manner of the Office Action.

Dayley discloses a dough sheet rotary cutting system with a rotary cutter 28 (Figure 2) which divides a dough sheet 18 (Figure 2) into snack piece doughs 30 (Figure 2). In addition, hole punchings 32 (Figure 2) are transported in a second predetermined direction, and web scrap remnants 34 (Figure 2) are transported in a third predetermined direction by web conveyors 36 and 38 (Figure 2) (column 3, lines 33-44).

Dayley does not disclose the concept of using air pressure in combination with a pulling force on the web scrap to separate dough pieces from the web scrap. As noted by the Examiner, there is no suggestion of air pressure in Dayley. In addition, there is no disclosure of pulling the web scrap remnants 34 with a pulling force using the web conveyor 36. In particular, the web conveyor 36 is not situated to exert a pulling force

during cutting of the snack piece doughs 30. In this regard, please note Figure 2 of Dayley wherein the web scrap 34 is supported by the main conveyor 22 during the cutting step. As the main conveyor 22 is a continuous belt, the snack piece doughs 30 and the web scrap 34 travel at the same speed with no differential forces during the cutting process.

Bornhorst et al. was cited as teaching the use of pressurized gas flowing from passages 54 (Figure 2) to dislodge individual snack products from cavities 32 on rollers 30. However, even with this disclosure there is no suggestion of air pressure in combination with a pulling force to separate dough pieces from a web scrap. In this regard, in Bornhorst et al. there is no web scrap. In Dayley there is web scrap, but sticking of the dough pieces does not appear to be enough of a problem to incorporate pressurized air discharge. Further, as shown in Figure 2 of Dayley, the web conveyor 36 is located a large distance downstream from the rotary cutter 28 such that the web scrap 34 is supported by the main conveyor 22 as the snack piece doughs 30 are cut. Accordingly, even if pressurized air discharge were to be incorporated into the Dayley rotary cutter 28, there would be no simultaneous pulling on the web scrap 34 as in the present process.

35 USC §103(a) Rejection of Claim 11 over Dayley, Bornhorst et al. and Fay

Dependent claim 11 is submitted to be unobvious over Dayley, Bornhorst et al. and Fay for essentially the same reasons argued above for independent claim 6.

35 USC §103(a) Rejection of Claim 12 over Dayley, Bornhorst et al. and Kuchuris

Dependent claim 12 is submitted to be unobvious over Dayley, Bornhorst et al. and Kuchuris for essentially the same reasons argued above for independent claim 6.

Conclusion

In view of the amendments and arguments, favorable consideration and allowance of claims 1-20 is requested. Should any issues remain, the Examiner is requested to contact the undersigned by telephone.

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